REMARKS

Claims 1-4, 11, 18 and 20 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng et al. (U.S. Patent 6,541,382) in view of Ballantine (U.S. Patent 6,417,070). This rejection is respectfully traversed for the following reasons.

Claim 1 recites, "patterning a silicon oxynitride layer having a composition $Si_XO_YN_ZH_A$" and "conditioning the patterned silicon oxynitride layer such that the silicon oxynitride layer has a composition $Si_XO_{Y+}N_ZH_{A-}$". (Emphasis added.)

The Examiner argues that "in the process of the combination [of Cheng et al. and Ballantine] the same materials are treated in the same manner as in the instant invention and therefore it is reasonable to expect that the recited change in stoichiometry would result in performing that process". (Emphasis added.)

However, Applicant does not believe that the Cheng et al./Ballantine combination and Applicant's specification teach "the same materials are treated in the same manner" as suggested by the Examiner.

It is initially noted that both Cheng et al. and Ballantine et al. teach that silicon oxide layers should be formed by rapid thermal oxidation (RTO) in the presence of steam. (Cheng et al., Col. 8, lines 12-15; Ballantine et al., Col. 2, lines 44-46.) Because both Cheng et al. and Ballantine et al. teach the same method for forming silicon oxide layers, Ballantine et al. does not add anything of significance to the teachings of Cheng et al., with respect to Claim 1. The following analysis will therefore focus on the teachings of Cheng et al.

As described above, Claim 1 recites "a silicon oxynitride layer having a composition $Si_XO_YN_ZH_A$". Cheng et al. do not teach that the "silicon oxynitride ARC 16" has such a composition. More specifically, Cheng et al. do not refer to the presence of hydrogen in silicon oxynitride ARC 16. Moreover, Claim 1 recites "conditioning the patterned silicon oxynitride layer such that the silicon oxynitride layer has a composition $Si_XO_{Y+}N_ZH_{A-}$". Because Cheng et al. do describe the presence of hydrogen in silicon oxynitride ARC 16, Cheng et al. necessarily do not describe a reduction in the presence of hydrogen in silicon oxynitride ARC 16.

For these reasons, Cheng et al. and Applicant's Claim 1 do not teach "the same materials" as suggested by the Examiner.

Moreover, Cheng et al. teach that as "a sacrificial silicon oxide layer 70a is grown", "the silicon oxynitride ARC 16 is also partially oxidized to form a silicon oxide layer 70b on the ARC surface". (Cheng et al., Col. 8, lines 12-13 and 19-22.) Cheng et al. indicate that the silicon oxide layers 70a and 70b can be formed "by rapid thermal oxidation (RTO) with in-situ generated steam (ISSG)" or by "another clean thermal oxidation process … such as furnace oxidation or dry RTO in oxygen". (Cheng et al., Col. 8, lines 14-19.) Cheng et al. do not provide any additional specifications or parameters for forming the silicon oxide layers 70a and 70b. Thus, Cheng et el. must assume that one of ordinary skill in the art would be able to adjust the various specifications and parameters of the recited processes in order to create silicon <u>oxide</u> layers 70a and 70b, and <u>not</u> silicon oxynitride layers. Contrary to the Examiner's assertions, it is not reasonable to assume that specifications and parameters required to create silicon

oxide are the same as specifications and parameters required to create a silicon oxynitride layer having a composition $Si_XO_{Y+}N_ZH_{A-}$, as recited by Claim 1.

Because the process implemented by Cheng et al. results in a different material than recited by Claim 1, Cheng et al. fail to teach or suggest that the materials "are treated in the same manner" as suggested by the Examiner.

For the foregoing reasons, Claim 1 is allowable over Cheng et al. in view of Ballantine. Claims 2-4, 11, 18 and 20, which depend from Claim 1, are allowable over Cheng et al. in view of Ballantine et al. for at least the same reasons as Claim 1.

Claims 12-17 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng et al. in view of Ballantine and Wolf.

Claims 12-17, which depend from Claim 1, are allowable over Cheng et al. and Ballantine for at least the same reasons as Claim 1. Because Wolf does not remedy the above-described deficiencies of Cheng et al. and Ballantine, Claims 12-17 are allowable over Cheng et al. in view of Ballantine et al. and Wolf.

Claim 19 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng et al. in view of Ballantine and Applicants Admitted Prior Art (AAPA).

Claim 19, which depends from Claim 1, is allowable over Cheng et al. and Ballantine for at least the same reasons as Claim 1. Because AAPA does not remedy the above-described deficiencies of Cheng et al. and Ballantine, Claim 19 is allowable over Cheng et al. in view of Ballantine et al. and AAPA.

Applicant maintains the arguments made in response to the Office Action dated July 20, 2004.

CONCLUSION

Claims 1-4 and 11-20 are pending in the present application. Reconsideration and allowance of these claims is respectfully requested. If the Examiner has any questions or comments, he is invited to call the undersigned at (925) 895-3545.

Respectfully submitted,

Customer No. 027158

E. Eric Hoffman
Attorney for Applicants
Reg. No. 38,186

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